

In the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently amended) A reflector, comprising a plurality of light-reflective concave portions formed on a surface of a base material, each of the concave portions is a non-spherical concave surface, being formed such that an inclination angle of the concave portion at a periphery thereof has a maximum value, said maximum value of the inclination angle being that of at least a first point along the periphery having a larger inclination angle than the inclination angle of a second point along the periphery;

the periphery being formed by an intersection of the concave surface and the surface of the base material and having a curvilinear form; and

wherein the inclination of the concave portion is measured as an absolute value of an angle with respect to the surface of the base layer of a plane tangent to the concave portion.

~~each of the concave portions being a concave surface and being formed so that an inclination angle (an absolute value of an angle between a plane tangential to a point on the concave surface and the surface of the base material) is maximized on a side portion of said concave portion.~~

2. (Original) The reflector according to claim 1, wherein the concave surface of each of the concave portions has a single minimal point (a point where the inclination angle becomes zero).

3. (Currently amended) The reflector according to claim 1, wherein the maximum inclination angle along the periphery (an absolute value) is in a range of 2° to 80°.

4. (Currently amended) The reflector according to claim 1, wherein the maximum inclination angle along the periphery ~~(an absolute value)~~ is in a range of 4° to 35°.

5. (Original) The reflector according to claim 1, wherein the plurality of the concave portions are formed randomly with a depth thereof ranging from 0.1 μm to 3 μm .

6. (Original) The reflector according to claim 1, wherein each of the plurality of the concave portions are arranged irregularly adjacent to each other.

7. (Currently amended) The reflector according to claim 1, wherein the plurality of the concave portions are formed so that the side portion having the maximum inclination angle of the concave surface along the periphery is aligned in a particular direction.

8. (Original) A reflection type liquid crystal display device, wherein the reflector according to claim 1 is mounted therein.

9. (Currently amended) The reflection type liquid crystal display device according to claim 8, wherein the reflector is formed so that the side portion having the maximum inclination angle along the periphery of the concave surface of each of the plurality of the concave portions is aligned in a certain direction and is mounted so that the side portion having the maximum inclination angle of the concave surface of each of the plurality of the concave portions is disposed on a side opposing a viewpoint of an observer.

10. (Previously presented) A reflector, comprising: a plurality of concave portions formed on a reflector surface, an inner surface of each of the concave portions including a bottom curved surface and a peripheral curved surface, the peripheral curved surface being a part of a first sphere having a first

radius, the bottom curved surface being a second sphere having a second radius different from the first radius, and the bottom curved surface being located within the peripheral curved surface, wherein the first radius is smaller than the second radius, and a normal line extending from a center of the first sphere to the reflector surface and a normal line extending from a center of the second sphere to the reflector surface are not collinear.

11. (Original) The reflector according to claim 10, wherein the normal lines extending from the respective centers of the first sphere and the second sphere to the reflector surface are spaced apart from each other in a range of 0.1 μm to 10 μm .

12. (Original) The reflector according to claim 10, wherein an inclination angle of the peripheral curved surface is set in a range of 10° to 35° and -35° to -10° , and an inclination angle of the bottom curved surface is in a range of 4° to 17° and -17° to -4° .

13. (Previously presented) The reflector according to claim 10, wherein the plurality of concave portions are formed randomly with the depth thereof ranging from 0.1 μm to 3 μm .

14. (Previously presented) The reflector according to claim 10, wherein the plurality of concave portions are formed so that they are continuously connected to each other.

15. (Previously presented) The reflector according to claim 10, wherein the plurality of concave portions are formed along with many grooves on the reflector surface.

16. (Original) A reflection type liquid crystal display device, wherein the reflector according to claim 10 is mounted therein.

17. (Withdrawn) A reflector-type liquid crystal display device comprising:

a reflector comprising a plurality of light reflective concave portions on a surface of a base material, each said concave portion having a curved surface with a maximum inclination angle at one side portion thereof so that the one side portion has a larger reflectance magnitude than an opposing side portion, and a light reflectance peak at a predetermined angle in accordance with a location of the maximum inclination angle, and that opposes a viewpoint of an observer.

18. (Withdrawn) A reflector, comprising:

a base material having a light-reflecting surface; and

a plurality of curved portions, said portions formed on a surface of the base material,

wherein said curved portions have a plurality of shapes, in which an inclination angle (an absolute value of an angle between a plane tangential to a point on the surface of the curved portion and the surface of the base material) of each said shape is maximized on a side portion of said curved portion.

19. (Withdrawn) A reflector as recited in claim 18, wherein an intensity of incident light reflected from the curved portions is preferentially increased in at least one desired angular direction.

20. (Withdrawn) A reflector as recited in claim 18, wherein said shapes are of a concave form as viewed by an observer opposed to the light-reflecting surface.

21. (Withdrawn) A reflector as recited in claim 18, wherein at least one of the shapes is a section of an ellipsoid intersecting the reflector surface at an angle other than orthogonal to an ellipsoid axis.

22. (Withdrawn) A reflector as recited in claim 18, wherein at least one of the shapes is a section of a paraboloid intersecting the reflector surface at an angle other than orthogonal to a paraboloid axis.

23. (Withdrawn) A reflector, comprising:
a base material having a light-reflecting surface; and
a plurality of curved portions, said portions formed on a surface of said base material,

wherein said curved portions have a plurality of shapes, each shape having at least two radii of curvature whose centers of curvature lie on non-collinear lines, each said line being orthogonal to a plane of the base material.

24. (Withdrawn) A reflector as recited in claim 23, wherein an intensity of incident light reflected from the curved portions is preferentially increased in at least one desired angular direction.

25. (Withdrawn) A reflector as recited in claim 24, wherein said shapes are of a concave form as viewed by an observer opposed to the light-reflecting surface.

26. (Withdrawn) The reflection type liquid crystal display as recited in claim 9 wherein a layer of optically transparent material that does not substantially diffuse incident and reflected light passing through said layer is applied to the reflector.

27. (Withdrawn) The reflection type liquid crystal display as recited in claim 16 wherein layer of optically transparent material that does not substantially diffuse incident and reflected light passing through said layer is applied to the reflector.